



NU DASMARIÑAS

GESTS01X – Science, Technology and Society

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Week 8 -CLIMATE CHANGE



Learning Outcomes

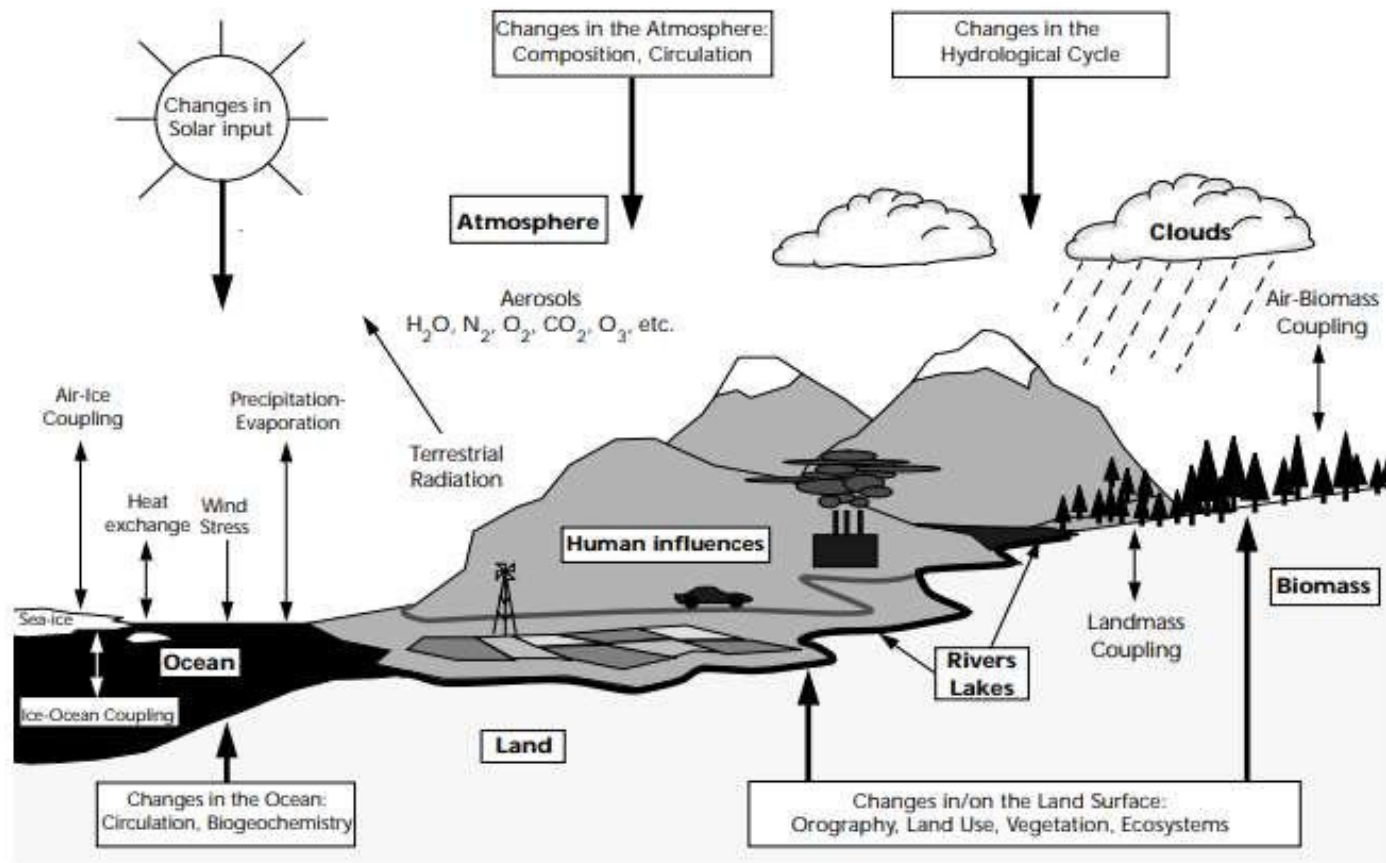
At the end of the lesson the student should be able to:

- ✓ explain climate change and its adverse effects on the environment and society
- ✓ Promote significance of disaster preparedness in the face of natural disaster
- ✓ Discuss the value of conserving and preserving the environment to address the impacts of climate change on society

Climate Change

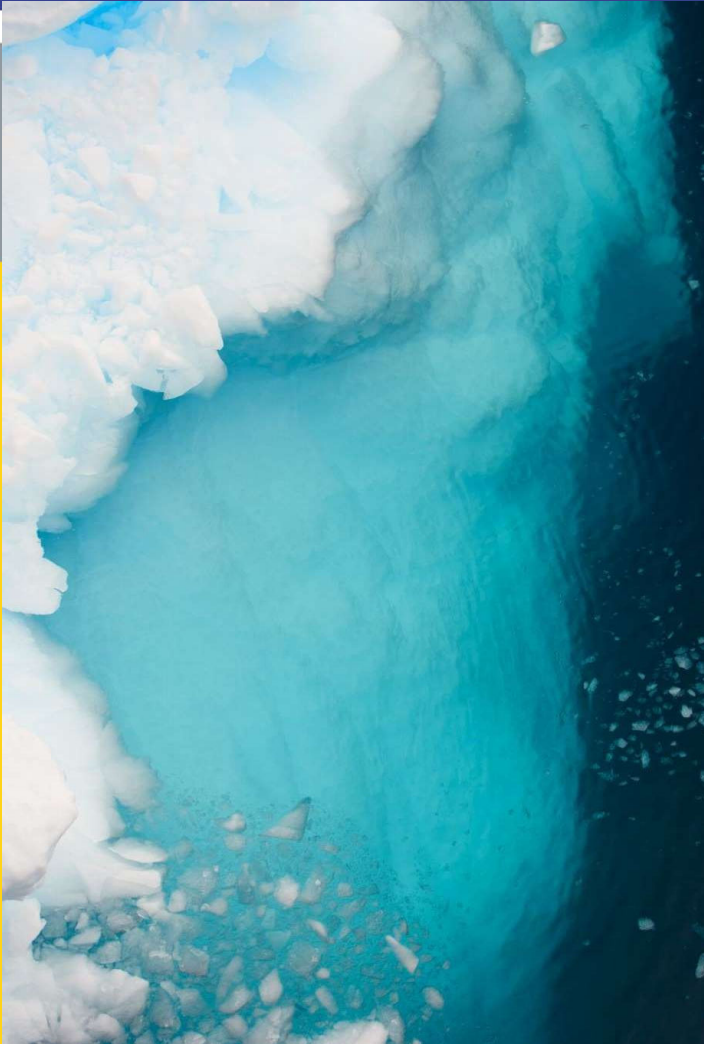
Climate Change is defined as the change in climate attributed directly or indirectly to human activity which, in addition to natural climate variability, is observed over comparable time periods.





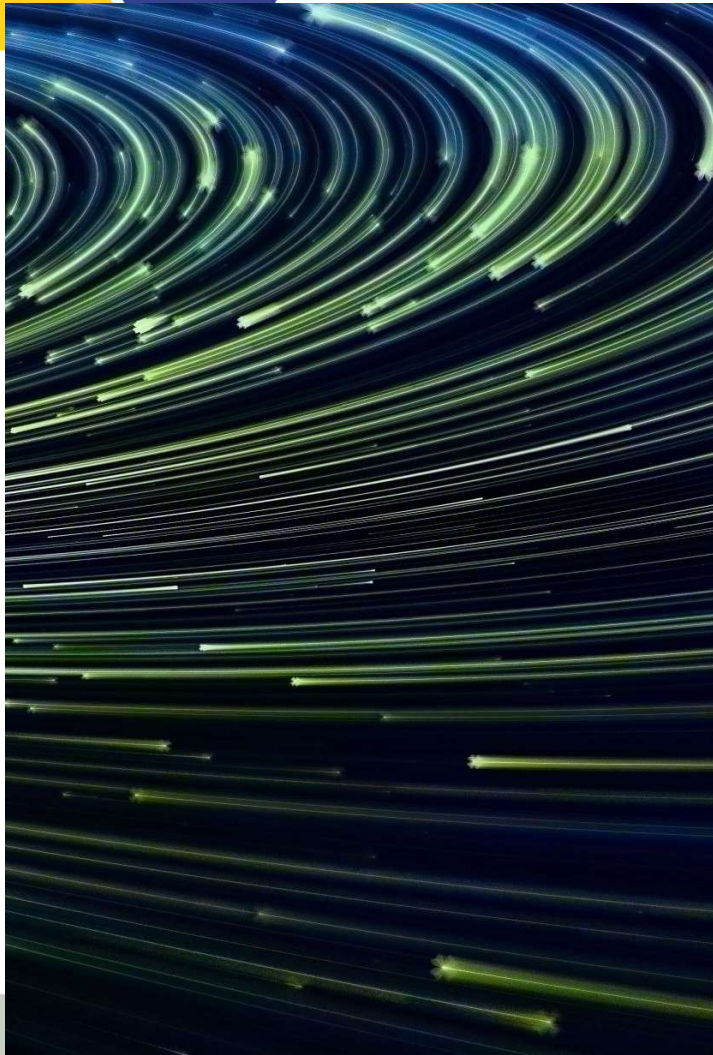


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Components of Climate System

- Atmosphere;
- Ocean;
- Land surface;
- Ice and snow surfaces (both land and ocean areas); and,
- Biosphere (both terrestrial and marine).



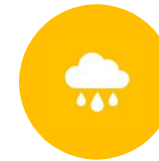
Global Nature of the Climate System



OZONE HOLE IN THE
STRATOSPHERE



EL NIÑO — SOUTHERN
OSCILLATION (ENSO)



MONSOON

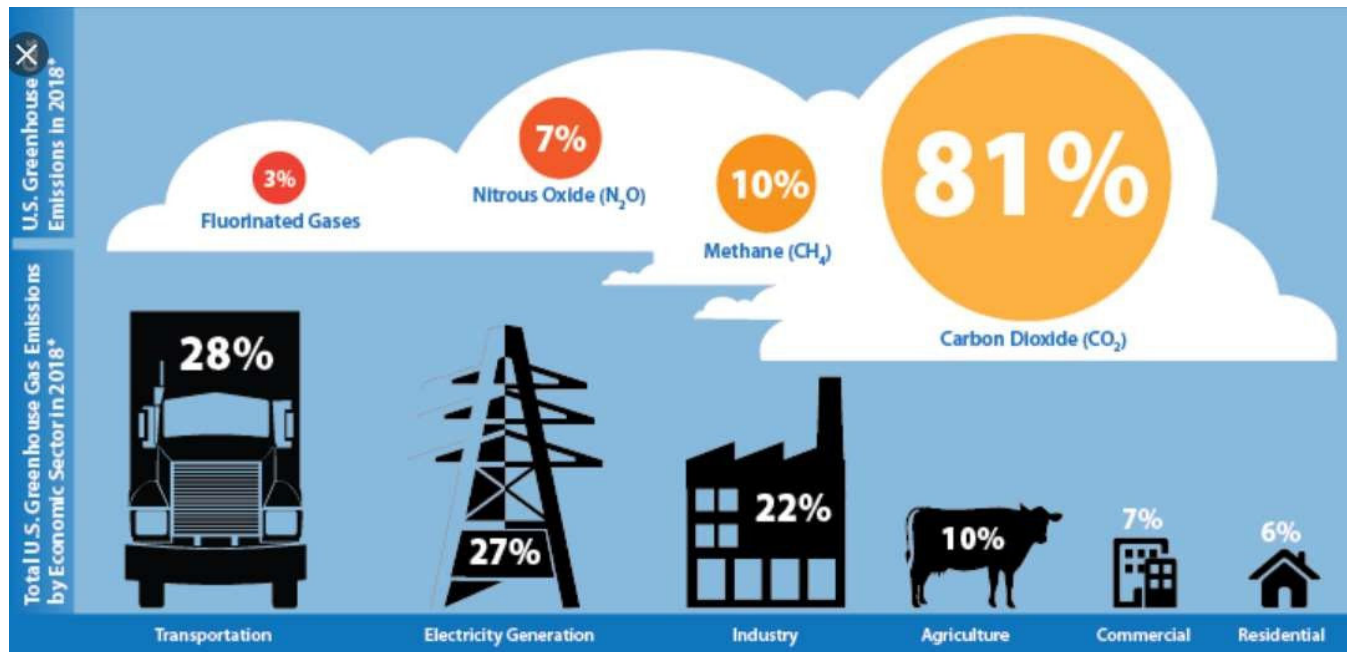


VOLCANOES



GHG

<http://www.globalcarbonatlas.org/en/CO2-emissions>



Deforestation



Experts estimate that a chunk of forest the size of a soccer field is lost every second to deforestation.
(Image: © Shutterstock)



Effects

Melting of ice caps

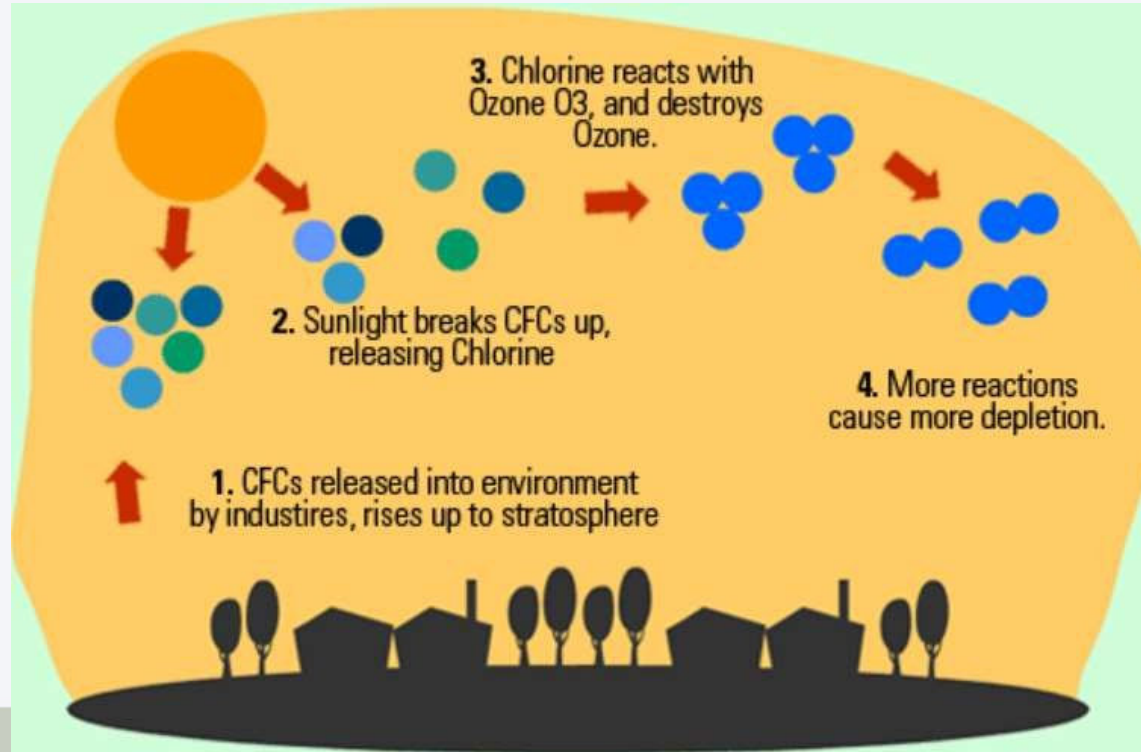
Natural ocean currents

Albedo

Changing wildlife adaptations

Diseases

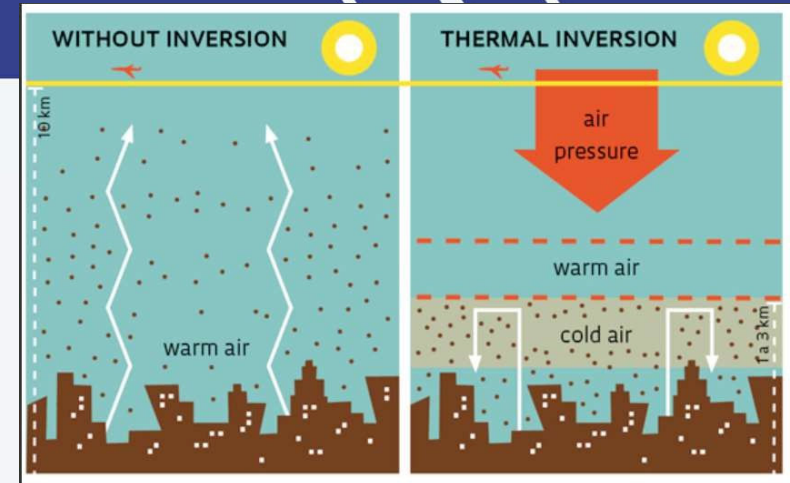
Stratospheric Ozone Depletion



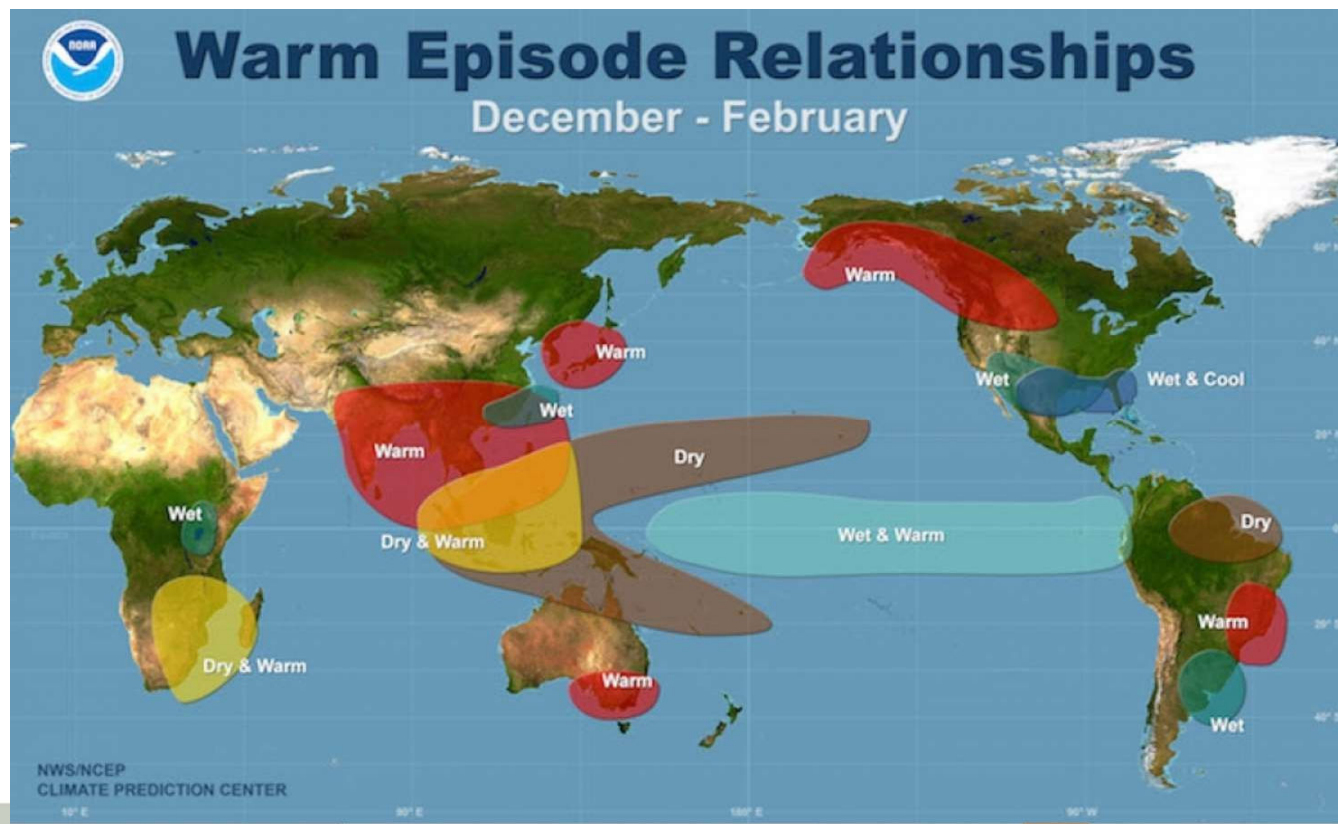
Thermal Inversion

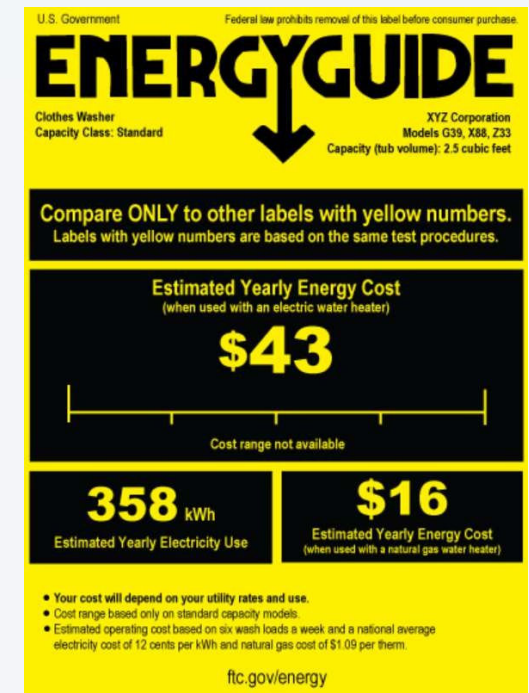
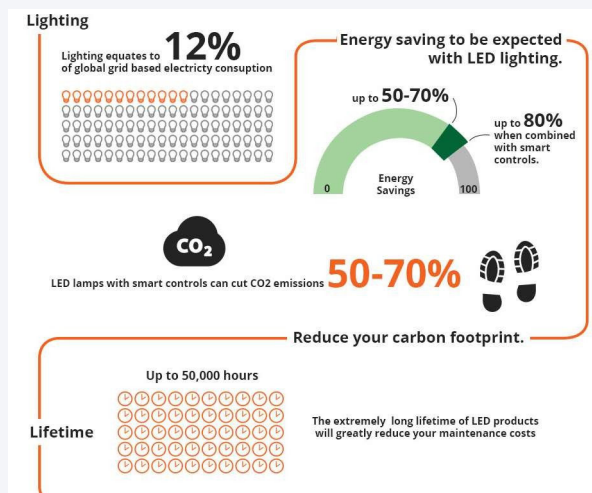
The major component of photochemical smog, peroxyacetyl nitrate (PAN), is a combination of different criteria pollutants.

Thermal inversion refers to areas where the normal decrease in air temperature with increasing altitude is reversed and the air above the ground is warmer than the air below it



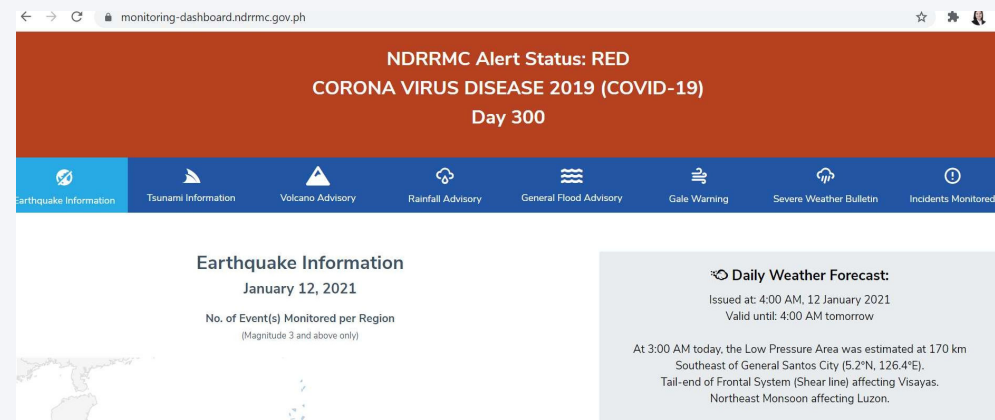
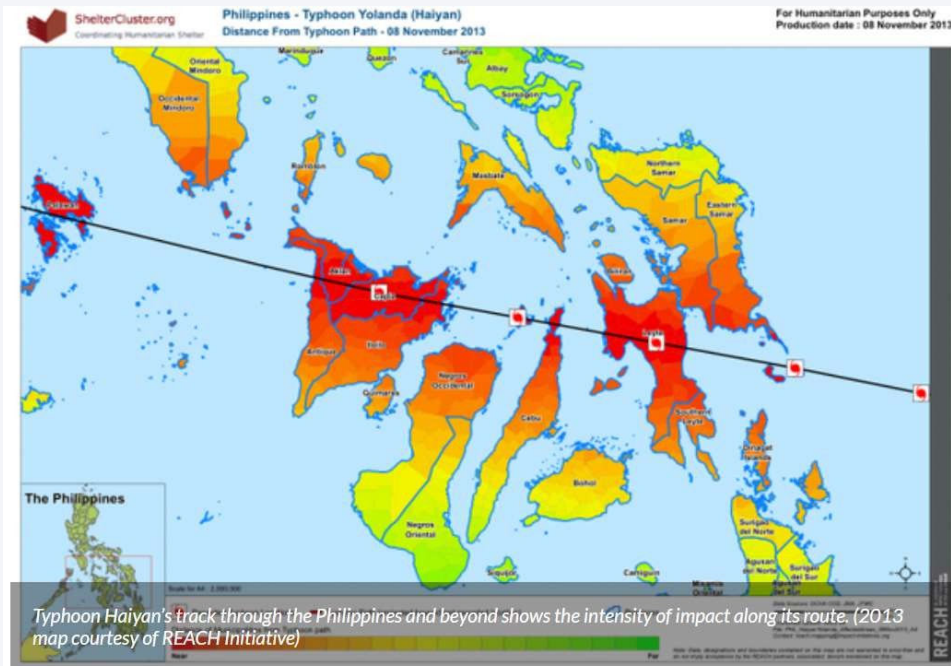
El Nino – La Nina





Environmental Awareness

Disaster Risk Management





Activity

Watch the video : Typhoon Haiyan – Eye of the Storm

https://www.youtube.com/watch?v=-BnahLG_DmQ

Pair Essay: with a partner, answer the following questions

(limit to 300-500 words)

What pieces of evidence are presented that prove the connection between climate change and the changing meteorological patterns?

How did the documentary affect your personal beliefs and actions toward protecting the environment?



References

<https://www.nationalgeographic.org/encyclopedia/smog/>

<https://www.climatecentral.org/news/where-is-el-nino-why-we-care-18152>

Ali, S., Hussain, T., Zhang, G., Nurunnabi, M., & Li, B. (2018). The Implementation of Sustainable Development Goals in “BRICS” Countries. *Sustainability*, 10(7), 2513.

Quinto, E. M., & Nieva, A. D. (2019). *Science, Technology and Society*. Philippines: C&E Publishing.



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Thank you
for
listening!